

D.N. Jeff



A

GUIDE TO
THE SERVICES OF
THE ONTARIO WATER RESOURCES
COMMISSION

STANDARDS DEVELOPMENT BRANCH OMOE
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A guide to the services of the
Ontario Water Resources
Commission.
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GUIDE TO
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THE ONTARIO WATER RESOURCES
COMMISSION

The purpose of this booklet is to describe the functions of the various divisions and branches of which the Commission is comprised.

It has been prepared with a view to providing such information as will make the services of this government agency more readily available to those requiring them.

801 Bay Street,
Toronto 5,
Ontario.

September 1, 1966.

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OFFICE OF THE GENERAL MANAGER

General Manager -	D. S. Caverly
Assistant General Managers -	L. E. Owers
	K. H. Sharpe
	F. A. Voege
	A. K. Watt
Assistant to the General Manager	L. M. Tobias

The overall administration of the Commission is the responsibility of the General Manager. He is assisted by four Assistant General Managers who are responsible for the supervision and co-ordination of the activities of the various divisions of which the Commission is composed. This responsibility is divided as follows:

Divisions of Project Development, Construction, and Plant Operations - L. E. Owers.

Divisions of Sanitary Engineering, and Industrial Wastes - K. H. Sharpe.

Divisions of Laboratories and Research - F. A. Voege.

Division of Water Resources - A. K. Watt.

In addition to the above, many of the administrative details of the General Manager's office are handled by the office of the Assistant to the General Manager.

OFFICE OF THE COMMISSION SECRETARY

Commission Secretary -

W. S. MacDonnell

The Commission Secretary's responsibility includes the handling of official correspondence and documents of the Commission, the preparation of agenda for Commission meetings, the recording, keeping and certifying of Commission meeting minutes, officiating at the opening of tenders, the administration of the Office Services Branch and other related activities.

OFFICE SERVICES BRANCH

The Office Services of the Commission come under the jurisdiction of the Commission Secretary. The Branch consists of the following services:

(1) Files Section which maintains a filing and microfilm system for all Commission correspondence, reports, certificates and plans;

(2) Print Shop which handles the printing of OWRC publications, and the duplication of typewritten materials;

(3) Laboratory Maintenance Services which provides mechanical, electrical and other stationary maintenance services for the OWRC Laboratory building, carries out maintenance and repairs on Commission vehicles, fabricates certain mechanical and field equipment required by the various divisions, and makes repairs to such equipment as required;

(4) Library which provides library facilities for the use of the Commission staff.

INFORMATION BRANCH

Information Officer -

John C. Scott

The principal activity of the Information Branch is the dissemination of information to the general public concerning the Commission and its activities. This is effected through the distribution of news releases to various media, such as newspapers, TV, radio and trade publications. Attention is also given to numerous enquiries received by mail, by telephone and through personal calls at the office.

Through inclusion on the news release mailing list, members of the Ontario Legislature are kept informed of OWRC-municipal projects undertaken in their constituencies as well as other OWRC programs.

Other activities of the Branch include: the organization of official opening ceremonies for OWRC projects as well as any student education programs which may be scheduled along with such ceremonies; the preparation and placing of all OWRC display advertisements and the placing of tender call advertisements; the planning and handling of OWRC exhibits, including the Commission's annual display at the Canadian National Exhibition; the preparation of copy and layouts for various booklets, pamphlets, and brochures published by the Commission; the distribution of OWRC publications; the preparation of material for special articles, speeches, etc., as required; the operation of a complete photographic and 35 mm. slide service and files; the publication of the staff-orientated "OWRC News".

LEGAL BRANCH

Senior Solicitor -

H. Landis

The work of the Legal Branch may be summarized as follows:

(a) Advising on and drafting of amendments to The Ontario Water Resources Commission Act including regulations and forms thereunder.

(b) Advising on and drafting of standard forms of agreement and special agreements between the Commission and municipalities, engineers and contractors.

(c) Advising on legal aspects of and drafting standard forms for the acquisition of property, including expropriations and the settlement of issues with solicitors for property owners, municipalities and other public authorities.

(d) Advising on legal questions that arise in negotiations with public authorities such as Crown corporations, municipalities and departments of government.

(e) Negotiations and settlement of claims involving the Commission, including claims arising out of the acquisition of property, construction of works, bankruptcies and the enforcement of bonds.

(f) Research for and the preparation of opinions on questions of law related to the work of the Commission.

(g) Advising on alleged violations of The OWRC Act and regulations thereunder, including assistance in prosecutions conducted by crown attorneys and appearance as counsel.

(h) Advising on and assisting in civil litigation and arbitrations arising out of the work of the Commission, including liaison with the Department of the Attorney General and retained counsel and appearance as counsel.

(i) Addresses and lectures and advising generally on the legal aspects of the work of the Commission.

PERSONNEL BRANCH

Director, Personnel -	A. R. W. Uren
Personnel Officer -	H. W. Tonkin

The Personnel Branch has the responsibility of supervising and co-ordinating the program of personnel administration.

Recruiting of engineering, scientific, technical, secretarial and clerical staff for Head Office involves maintaining contact with the National Employment Service, the principal universities of Ontario, and other Ontario and Canadian institutions, corresponding with British and foreign professional personnel, and conducting interviews in the field and at Head Office.

Recruiting of operators, electricians, and mechanics for Plant Operations staff involves preparing and placing all advertising and job postings, participation in selection, and in this connection, frequently assuming a leading part in discussions with Municipal Councils and Local Advisory Committees.

The Branch participates in the development of overall personnel policy and regulations and interprets Commission policy to staff. Supervisors are advised on employee relations procedures and the handling of staff disciplinary problems.

Assistance with the development and training of personnel is given and a program of financial assistance co-ordinated.

A salary administration program is carried out together with a continuous review of the Ontario Government classification program; recommendations are made to the Commission as conditions change. Wage and salary surveys provide up-to-date information for maintenance of plant staff salaries at community levels.

The monthly appointment list for head office and plant staff is prepared and records are maintained to meet the requirements of the Provincial Treasurer, the Provincial Auditor and the Commission.

Liaison with the Public Service Superannuation Board and co-ordination of the Workmen's Compensation Board programs, the OWRC medical-surgical health plan, the legal requirements of the Ontario Hospital Services Commission, and the Ontario Municipal Employees Retirement Program are also handled by the Personnel Branch.

PROCUREMENT BRANCH

Procurement Officer -

A. North

The Procurement Branch is responsible for the acquisition, retention, maintenance and distribution of the goods and materials required for the performance of the Commission's programs. These responsibilities are performed by the following sections:

(a) Purchasing - through a system of competitive selection, the required equipment, materials and services are purchased for both head office and projects.

(b) Stores - Stocks of consumable goods for both the head office and laboratory locations are maintained to ensure their availability for continuing program needs. Technical and other equipment is stored and maintained for use on demand.

(c) Inventory Control - the maintenance of records on all goods, material and equipment for head office and projects to ensure the protection of the Commission's assets and to ensure the adequacy of supplies for the Commission's needs.

SYSTEMS AND PROCEDURES BRANCH

Systems and Procedures Officer -

E. V. Sanders

The Systems and Procedures Branch is concerned with the design and implementation of systems for new programs, the assessment and improvement, when required, of existing systems and procedures, and the development of management information systems for the Commission through the use of Electronic Data Processing equipment.

The Branch provides a service function to those areas of the Commission which request its assistance. It can advise and recommend changes where it sees fit but the implementation of any changes is a line-management function.

DIVISION OF CONSTRUCTION

Director -	A. W. Shattuck
Assistant Director -	J. C. F. Macdonald
Supervisor -	W. A. S. Marshall
Supervisor -	C. J. K. Wilson

The Division of Construction is responsible for administering the Commission's contracts with consulting engineers and contractors.

The Preliminary Agreements with municipalities give the Commission authority to enter into agreements with consulting engineers to prepare plans and specifications and to call for tenders.

On projects involving sewage treatment plants, lagoons and water treatment plants, pre-design meetings are held as soon as consultants have prepared rough sketches and have made preliminary design calculations. These meetings are attended by representatives of the consultants and the different branches of the Commission. The topics discussed at these meetings include capacity, degree and type of treatment, choice of equipment and pre-selection of equipment, plant flexibility, choice of pumps and the necessary approvals from the Department of Labour and the railways etc. In the case of lagoons, the size, slope and width of berms and protection against erosion are discussed.

When Consulting Engineers have not previously carried out work for the Commission, a copy of Information for Consulting Engineers is provided at pre-design meetings and Commission requirements are reviewed in some detail.

Early in the negotiations of a new project the Division of Project Development sets up a municipal officials liaison group known as the Local Advisory Committee. Meetings are held prior to and during construction to make all necessary arrangements for a minimum of inconvenience to local residents.

The Division of Construction, in its review of plans and specifications, is particularly concerned with the specifications and form of tender. A thorough check is made and a list of deficiencies is prepared and sent to

the consulting engineer so that he may make corrections prior to the calling of tenders.

An engineer in the Division of Construction, who has been assigned a project, is directly responsible to see that both the consultant and the contractor perform their work satisfactorily. Each engineer visits his projects regularly and submits inspection reports on the progress of the work.

All progress payments to contractors are prepared by the consulting engineers and sent to the Division of Construction where they are checked before being submitted to the Accounts Section for payment.

DIVISION OF FINANCE

Director and Comptroller -	D. A. Joynt
Assistant Comptroller -	E. F. Heath
Chief Accountant -	A. J. Cox
Budget Officer -	J. C. McTeague
Chief Audit Accountant -	I. L. Wyllie
Contract Payments -	T. Beall
Payroll -	W. Glover
Senior Accountant -	O. Bernard
Accounts Payable -	J. Figueira

The Division of Finance is concerned with the financial affairs of the Commission. This includes financial planning, the development and implementation of financial controls, the formulation of accounting policy and the preparation of financial statements. This Division is further responsible for the banking and custody of the Commission's monies and securities, the collection of payments due from municipalities, and the provision of insurance.

More specifically, the responsibilities of the Division are as follows:

(a) The establishing, co-ordinating and administering of an adequate plan for the provision of funds and the control of operations, based upon a comprehensive system of estimates, budget reporting and forecasts.

(b) The administering of the accounting function of the Commission, together with the methods and systems embracing the design, installation and custody of all accounting books, financial records and forms throughout the Commission.

(c) The maintaining of banking arrangements, receiving, having custody of and disbursing the Commission's monies. The Director reports to the Provincial Investment Committee on the funds available for investment and provides for the custody of the securities purchased.

(d) Protecting the assets of the OWRC through maintaining effective internal control. The Auditing of all financial and business records and all receipts and disbursements of the Commission, including all books and

accounts of all officers and agents of the Commission who are charged with the receipt and disbursement of money or materials, or who have jurisdiction over labour.

(e) The collection of accounts due the Commission and assisting with the development of special arrangements when required. Also the collection and control of revenues from the sale of licences, publications, etc.

(f) Providing insurance coverage to safeguard the employees, business and property of the Commission, including fidelity bonds, travel accident insurance, legal liability insurance, automobile insurance and project insurance.

(g) The preparation and interpretation of the financial statements and reports of the Commission, comparing performance with operating plans and standards, and reporting and interpreting the results of operations to all levels of management.

(h) The provision of special assistance to municipalities upon their request with regard to water utility accounting - establishing, improving or maintaining their particular accounting systems.

DIVISION OF INDUSTRIAL WASTES

Director -	R. H. Millett
Assistant Director -	D. P. Caplice
Supervisor -	F. R. Phoenix

The Division of Industrial Wastes administers the provisions of The OWRC Act for the control of the pollution of public waters resulting from the disposal of industrial wastes. The Division investigates and reports on industrial water-use and waste disposal, and recommends measures for the treatment or control of discharges that do not conform with the objectives for water quality for the Province of Ontario or with recommended municipal sewer-use control limits. The Division reviews plans of works for the collection, treatment, transmission and disposal of industrial wastes, and prepares recommendations for approval of such works, as required by the Act. Technical assistance is provided to industry during waste disposal surveys and in subsequent consultations with respect to the establishment of suitable waste control programs. Surveillance of all sources of industrial waste discharges to public waters is maintained as a continuing regulatory responsibility.

Technical assistance is given to municipalities in evaluating industrial waste discharges to existing or proposed municipal sewage works. In such cases a schedule of sewer-use controls is recommended for inclusion in a municipal sewer-use by-law to protect sewage works and to ensure satisfactory sewage treatment plant operation.

The expansion of industrial processing in Ontario indicates the increasing need for the control of industrial water-use and waste disposal as an important part of water resources management. The functions of the Division are closely integrated with all aspects of water resources management as carried out by the Commission as a whole.

DIVISION OF LABORATORIES

Director -	J. H. Neil
Supervisor -	Bacteriology Branch - L. T. Vlassoff
Supervisor -	Biology Branch - C. F. Schenk
Supervisor -	Chemistry Branch I - C. E. Simpson
	Water & Sewage Analyses
Supervisor -	Chemistry Branch II - H. A. Clarke
	Industrial Waste Analyses

The Division of Laboratories analyzes samples of water, sewage and industrial wastes submitted by Commission staff and other government agencies. Programs of the four branches which make up the Division are as follows:

Counts and indentification of bacteria in drinking water supplies, treated waste waters and rivers and lakes form most of the work of the Bacteriology Branch. Samples from municipal distribution systems, sewage treatment plant discharges and receiving streams are received routinely. Special sections of the Branch devise and improve methods of detecting aquatic micro-organisms which may be injurious to humans or cause aesthetic problems.

The Biology Branch carries out surveys of aquatic life to determine the effects of pollution on water quality. In the laboratory, tests are performed on fish to assess the toxicity of industrial wastes and pesticides. The Branch studies the control of nuisance growths of aquatic vegetation and administers a permit system for the use of chemicals in public waters. Algae in municipal supplies are monitored and special problems investigated.

The function of Chemistry Branch I is largely that of analysis. Over 170,000 tests are performed each year, primarily on waste discharges and polluted waters. Analytical results form the basis for recommendations on remedial measures. Analysis of mineral quality provides information on the suitability of water supplies for public use.

Chemistry Branch II makes specific identifications of pollutants from industries and other sources. Tests carried out on industrial wastes are

varied and include those for toxic and odour-producing materials. Water contaminants such as gasoline, fuel oils and pesticides are identified.

DIVISION OF PLANT OPERATIONS

Director -	B. C. Palmer
Assistant Director -	C. W. Perry
Regional Supervisors -	A. C. Beattie
	D. A. McTavish

The Division of Plant Operations is responsible for the operation and maintenance of all water and sewage works financed and built by the OWRC. This is carried out by a headquarters staff of engineers, technicians, clerical assistants and a field staff of plant operators, who report to Regional Operations Engineers.

The steps involved in developing the operating program of a project are as follows:

(1) The engineering design is reviewed with the consultants, the divisions of Sanitary Engineering and Construction and other divisions of the Commission such as Industrial Wastes and Water Resources.

(2) Prior to the commencement of operation, engineers from this Division meet with the Local Advisory Committee to explain staffing requirements, the operating budget and other problems associated with the startup of the works. The Personnel Office of the Commission secures suitable candidates for the operating positions. Their qualifications are reviewed by the Operations Engineers and the Local Advisory Committee and selections made.

(3) The Local Advisory Committee meets with the Regional Operations Engineers frequently to review operating budgets and expense statements, rates of pay for operating staff and the need for major repairs of alterations, as well as to make recommendations on any matters pertinent to the operation of the project.

The detailed supervision of OWRC water and sewage works projects is carried out by a divisional staff of engineers. The Province is divided into geographic regions with each being the responsibility of an Operations Engineer and his assistants. Actual operation of the works is done by local plant operators who are on OWRC payroll and are directly responsible to the Operations Engineer for their region.

The head office organization also includes a staff of electrical, mechanical and controls technicians who establish and supervise a program of preventive maintenance for equipment at all OWRC projects. Assistance is given to the project operating staff in making repairs after an emergency breakdown.

The Division co-operates with the Procurement Branch in co-ordinating all project needs.

A clerical staff provides secretarial and stenographic service to the head office, including the maintenance of statistical data concerning OWRC projects, together with the analysis of cost information.

Annual reports on all projects where full time staff is employed are prepared by the Division and submitted to the municipality.

A program of operator training is provided dealing with the techniques and methods of sewage and water plant operation together with safety of personnel and equipment.

Overall divisional supervision is provided by the Director, Assistant Director and two Regional Supervisors.

DIVISION OF PROJECT DEVELOPMENT

Director -	P. G. Cockburn
Chief Property Agent -	H. H. Mitchell
Supervisor -	L. F. Pitura

The function of the Division of Project Development is to facilitate the development of sewage and water works projects in the Province. These are divided into two categories, municipal projects and provincial projects. The Division is also responsible for the acquisition of property (both freehold and easements) for such projects.

In addition, the Division administers regional studies for sewage and water works which are undertaken by consulting engineers for the Commission.

A more detailed description of the activities of the two sections of the Division, Projects Branch and Property Branch, follows:

PROJECTS BRANCH

Municipal Projects

The development of new OWRC financed water and sewage works projects, includes the following:

- (1) Holding of meetings with municipal representatives and consulting engineers relative to the proposed project.
- (2) Presentation of requests for OWRC projects to the Commission involving a general review of proposed financing, and the submission of related municipal data.
- (3) Submission of requests for Orders-in-Council and preparation of relevant material.
- (4) Collaboration with municipalities in the development of financing proposals, including agreements for ratification by municipal Councils.
- (5) Submission to the Ontario Municipal Board, involving the presentation of the material referred to in item 4 and including the preparation of necessary

advertisements, by-laws and presentations during OMB hearings.

Provincial Projects

The development of provincial water and sewage works projects includes the following:

(1) Preparation and distribution of applications for projects to the interested municipalities.

(2) Presentation of requests to the Commission for provincial projects, stating the need for the proposed works and the financial capability of the municipalities, along with a recommendation with respect to the appointment of a consulting engineer for the project.

(3) Meeting with consulting engineers to review the requirements of assignments and the procedures to be followed during the course of the assignment.

(4) Preparation of proposals for sewage and water services, including the calculation of rates.

(5) Consultations with municipalities concerning the development of the project and provision of assistance in submissions to the Ontario Municipal Board.

(6) Provision of assistance to other divisions in developing the project to the stage of the commencement of construction.

PROPERTY BRANCH

In addition to its basic responsibility in acquiring property (both freehold and easements) the Property Branch undertakes the following:

(1) Instruction of Ontario Land Surveyors.

(2) Instruction of local solicitors in conveyancing work and supervision of the mechanics of conveyancing.

(3) Preparation of legal documents in projects where there are many properties in order to reduce legal costs to the municipality.

(4) The checking, recording and filing of legal documents related to property matters.

(5) The maintaining of a register of all properties acquired, with details of all transactions.

(6) Registry office and titles searching work.

(7) Preparation of lagoon property reports for public hearings.

(8) Preparation of appraisal reports for properties.

(9) Negotiation of changes in engineering layout with consultants where proposals are impracticable from a property standpoint.

(10) Selection of test-drilling sites in conjunction with the Division of Water Resources.

(11) Assessing and settling of claims for crops and property damage.

(12) The carrying out of arbitrations on certain expropriations.

DIVISION OF RESEARCH

Director -	A. J. Harris
Supervisor, Technical Advisory Services	
Branch -	F. Guillaume
Supervisor, Field Projects Branch -	M. Fielding

The Division of Research is responsible for carrying out applied research in a broad spectrum of water resource problems concerned with the quality, supply, and purification of water, as well as the biological and chemical hazards, control, and treatment of domestic, commercial and industrial wastewaters. Preference is given to the investigation of problems currently before the Commission. Programs involving laboratory bench tests and studies, field evaluations, pilot plant projects, equipment development, literature searches, and report writing, are undertaken.

The organization of the Division includes, in addition to the Administrative Office, three branches the Field Projects Branch, the Technical Advisory Services Branch and the Special Studies Branch.

The Field Projects Branch establishes, operates and supervises a number of large-sized field pilot projects. These are usually related to advance processes and equipment; on the other hand, they may involve a study of problems for which there is no apparent information that would be applicable to the Ontario environment for water and wastewater treatment.

The staff of the Technical Advisory Services Branch consists of a number of specialists in water and wastewater treatment who provide technical assistance to the other divisions (particularly the divisions of Construction, Plant Operations and Sanitary Engineering) and to municipalities encountering unusual difficulties in their water and wastewater treatment processes. The Branch operates laboratory facilities set up in such a way that technical personnel and analytical equipment may be transferred from the main laboratory building and established on short notice at the various field sites where investigations are in progress.

Examples of problems dealt with are tastes and odours in water supplies, performance tests of water and

sewage treatment equipment or processes, and special operating difficulties encountered at water pollution control plants or water treatment plants with respect to digestion, settling, aeration, lagooning, filtration, chemical treatment, or the activated sludge itself.

The Special Studies Branch carries out studies of a non-engineering nature associated with the problems of water resources, although in many of the problems engineering principles are involved. These assignments use a team of highly trained scientists in chemistry and the life sciences, such as plant physiology, microbiology and bacteriology.

In view of the non-routine nature of the analytical requirements, this group operates laboratories capable of highly sophisticated techniques in various fields of study.

DIVISION OF SANITARY ENGINEERING

Director -	J. R. Barr
Assistant Director -	G. R. Trewin
Supervisor, Sewage Works -	H. Browne
Supervisor, Water Works -	A. B. Redekopp
Supervisor, Field Activities -	G. H. Kay
Supervisor, Water Quality Surveys Branch -	W. A. Steggles
Supervisor, Plumbing -	P. Spenst
Supervisor, Design Approvals Branch -	A. R. Townshend

The Division of Sanitary Engineering has the following areas of responsibility:

(a) The supervision and inspection, on a routine basis, of all the water works and sewage works in the Province, including those operated by the Commission.

(b) The examination of all plans and specifications for the construction of all new water works and sewage works in the Province, as well as all alterations and extensions.

(c) The promotion in municipalities of new water and sewage works projects, including meetings with municipal representatives.

(d) The provision of preliminary feasibility reports for smaller municipalities contemplating the installation of water supply and sewage treatment systems.

(e) The carrying out of municipal pollution surveys to protect their respective streams, rivers and lakes.

(f) The programming and supervision of courses provided by the OWRC for water works and sewage works operators.

(g) The review of subdivision plans and official plans submitted through the Department of Municipal Affairs to ensure the provision of adequate sewage disposal and water supply facilities.

(h) The supervision of the plumbing regulations in the Province and the development of technical programs for the control of plumbing.

(i) The investigation of complaints concerning pollution and water supply.

(j) The investigation of special problems concerning water supply and pollution control.

(k) The collection, recording, and dissemination of water quality data from ground and surface waters in the Province. This includes a program covering the international boundary waters.

(l) The performance of comprehensive waste water assimilation studies of river basins to evaluate quality control requirements.

(m) The carrying out of regional studies to determine the water supply and sewage treatment requirements of specific growth areas, and including an assessment of the ground and surface water resources, as well as an evaluation of streams, rivers and lakes as effluent receivers.

(n) The supervision and inspection of sanitary landfill operations as they relate to water pollution.

The Division of Sanitary Engineering is responsible for programs related to water supply and pollution control that were formerly under the provincial Department of Health.

CONFLICT
WITH DIV OF W.R.?

DIVISION OF WATER RESOURCES

Director -	K. E. Symons
Assistant Director -	D. N. Jeffs
Supervisor of Water and Well Management Branch -	I. D. Wilson
Supervisor of Surveys and Projects Branch -	T. J. Yakutchik
Assistant Supervisor of Hydrologic Data Branch -	B. A. Singh
Supervisor of River Basin Research Branch -	R. C. Hore

The Division of Water Resources undertakes the following responsibilities in the water resources field:

(a) The carrying out of a program of water resources management by means of a permit system, including the inspection and control of interference resulting from the taking of water from both ground and surface sources.

(b) The licensing of all contractors engaged in the business of boring and drilling for water.

(c) The conducting of hydrogeologic surveys and studies to advise and assist municipalities with respect to ground-water supplies, and the supervision of test-drilling and well-construction programs.

(d) Participation in surveys of water resources on a county or regional basis to assess water supply and waste treatment conditions and needs.

(e) The carrying out of surveys of ground and surface waters in river basins in Ontario.

(f) The collection, assembly and analysis of hydrologic data with particular emphasis on ground water, streamflow and geology, but also including precipitation and soil moisture.

(g) The investigation of basic hydrologic relations in Ontario under various conditions.

(h) The application of geophysical, modelling and other modern methods to ground-water exploration and

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ADRIAN PINE
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hydrologic analysis and assessment.

The work of the Division of Water Resources is basically the assessment, development and control of ground and surface water resources.

Date Due

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